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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,712	11/19/1999	DAVID MICHAEL SPRAGUE	1322/8	7620
25297	7590	12/29/2004	EXAMINER	
JENKINS & WILSON, PA 3100 TOWER BLVD SUITE 1400 DURHAM, NC 27707			TSEGAYE, SABA	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/443,712

Applicant(s)

SPRAGUE ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 48-57 and 79-88 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 48-57 and 79-88 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/23/04, 10/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. Claims 1-10, 48-57 and 79-88 are pending. Claims 83-88 rejected under 35 U.S.C. 112, second paragraph and claims 1-10, 48-57 and 79-82 are rejected under 35 U.S.C. 103(a).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 83-86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 83, lines 6 and 7, it is not clear whether "a first SS7 user part message" refers to the same first SS7 user part message cited in line 4.

In claim 86, lines 7 and 8, it is not clear whether "a first SS7 user part message" refers to the same first SS7 user part message cited in line 5.

***Claim Rejections - 35 USC § 103***

4. Claims 1-3, 5-10, 48-50, 52-57 and 79-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry et al. (US 5,923,659) in view of Joshi et al. (US 6,314,290).

Curry et al. discloses a system and method for controlling two or more telecommunications networks which are themselves capable of exercising a form of common channel signaling network control. In Fig. 12, Curry et al. discloses the receiving of an SS7

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packet message at an STP from an SSP (receiving at a first STP a first SS7 user part message).

Inherently, if the SSP is sending an SS7 packet message to the

STP over link, the link itself must be a type of SS7 link (over an SS7 signaling link). When the

STP recognizes that a foreign prefix exists, it directs the packet, according to the **translation**

**table stored within the STP** (a first STP configured to perform global title translation) (column

15, lines 47-67; column 21, lines 19-21), to the Internet Module, where the Module performs the

necessary address determination and adds the appropriate addressing and instructional overhead

to encapsulate the packet in one or more TCP/IP packets, and transmits the packet over the

Internet (encapsulating the SS7 user part message in a first IP packet; transmitting the IP packet

to a node over an IP network; IP packet includes adding a TCP header). See Fig. 12, and col. 21,

lines 12-50. Curry et al. does not expressly disclose performing the encapsulation of an SS7

packet and the transmitting of the newly encapsulated packet at the signal transfer point.

However, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the functions of the Internet Module with the functions of the signal transfer point. One would have been motivated to do this because it would streamline the setup, thus making the system more compact and reducing the number of components needed to make the system.

Further, Curry et al. does not expressly disclose configuring to perform SS7 message transfer part layer 3 routing at the signal transfer point.

Joshi et al. teaches that routing function is performed by a MSC/STP which is accomplished via a MTP layers 3 (see, fig. 4, column 6, lines 49-65).

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to add a function that perform SS7 message transfer part layer 3 routing, such as suggested by Joshi et al., to the STP of Curry et al. in order to determines how data transferred between nodes at the signal transfer point.

5. Regarding claims 3 and 50, Curry et al. does not expressly disclose adding a UDP header on the SS7 user part message, but it would have been obvious to do this. One would have been motivated to do this because Curry et al. discloses adding a TCP header, and UDP and TCP are very similar protocols and both work on the same layer-having the capabilities to add TCP would have also allowed UDP to be added.

6. Regarding claims 5 and 52, Curry et al. does not mention termination user part layer communications (transmitting the first IP packet without terminating user part layer Communications).

7. Regarding claims 10 and 57, Curry et al. describes sending the packet over foreign lands, so this would indicate that the message is being transmitted to and from different local areas, and therefore, classify as an E link between the first STP and the SSP.

8. Regarding claims 6 and 53, the connection between the STP 118 and the SSP 142 in Fig.

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12 can be considered equivalent to "A link" because it connects an STP with an signaling endpoint. Just as it was obvious to combine the Internet Module into the STP, similar reasoning also applies to putting the Internet Module into the SSP in order to complete the connection.

9. Regarding claims 7, 9, 54 and 56, the connection between the STP 118 and the STP 148 can be considered equivalent to a "B link" or a "D link" because it connects one STP to another STP. Thus, the IP network replaces the B link or the D link. In the art, the difference between a D link and a B link is very arbitrary and are often the same type of link.

10. Regarding claims 79 and 81, Curry et al. discloses using ISDN user part messages as part of the call control application protocol of SS7 (SS7 user part messages comprises an ISDN user part message). See col. 14, lines 6-20.

11. Regarding claims 80 and 82, the first signal transfer point naturally intercepts calls directed to a second signal transfer point simply by being in the connection process—all calls directed to the second signal point located over the Internet must go through the first signal transfer point at some point in the process (intercepting a SS7 message). As mentioned previously, the Internet module performs the necessary address determination and adds the appropriate addressing and overhead to encapsulate the packet in TCP/IP packets (inserting a destination IP address corresponding to the second signal transfer point). At the second signal

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point, there is an end office for receiving the call sent over the Internet (second signal point comprises an end office for a call associated with the first SS7 message).

12. Claims 4 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry et al. in view of Schrodi et al. (US 5, 173,897), in light of the rejections to claims 1 and 48.

Curry et al. does not expressly disclose including an application-level sequence number to the SS7 user part message. Schrodi et al. discloses adding a sequence number to ATM cells in transmission. See col. 1, lines 34-47. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the teachings from Schrodi et al. of adding sequence numbers to packets in the SS7 packets disclosed by Curry et al.. One of ordinary skill in the art would have been motivated to do this because adding sequence numbers allows the receiver to know if a packet fails to transmit, or if the packets get transmitted out of sequence.

13. Claims 8 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry et al. in view of the Admitted Prior Art (Figs. 1-7).

Curry discloses all the claim limitation as stated above. Further, Curry shows, in Figs. 12 and 15, a link between the SSP 110 and the STP 118, and a link between the SSP 146 and the STP 148; and a link between the STP (118 130), and the STP (148 140) through the Internet 136 (Bridge link B). Curry does not expressly disclose: the first and second STPs comprising a mated pair of STPs, and the IP network thereby functions as an SS7 C link. However, They are always deployed in pairs, to maintain redundancy in the network. Diagonal links D are used to connect mated STP pairs at a primary hierarchical level to another STP mated pair at a secondary

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hierarchical level. Extended links E are used to connect to remote STP pairs from an SSP.

Extended links are the alternate rout for SS7 messages in the event that congestion should occur within the home STP pairs.

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add a method that be able to send an IP packets over C link, such as that suggested by the Admitted Prior Art, in the method (that already is able to send the IP packets over E link) of Curry. Doing so would provide a telephone service over wide areas between different telephone system and carriers (Curry, column 9, lines 38-64). IP network thereby functions as and SS7 D link between the first and second STPs.

***Allowable Subject Matter***

14. Claims 83-88 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

**Response to Arguments**

15. Applicant's arguments with respect to claims 1-10, 48-57 and 79-88, have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

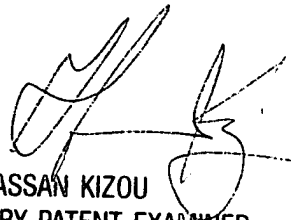


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST  
December 22, 2004



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